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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/691,109
Filing Date: October 20, 2003
Appellant(s): CONTA ET AL.

Thomas A. Gallagher
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 10, 2007 appealing from the Office action mailed September 4, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,864,666	Shrader	1-1999
6,977,932	Hauck	12-2005

6,873,627	Miller et al.	3-2005
6,339,595	Rekhter et al.	1-2002
US2004/0148428	Tsirtsis	7-2004

Greaves D. J., "CBG Orangepath: Automated Design of Data Transfer Protocols", January 2003, http://www.cl.cam.ac.uk/~djg11/wwwhpr/dsprotocol.html.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 31, 32, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Shrader (US Patent #5,864,666).

(Claim 31 discloses) an application-programming interface (API) for implementing a plurality of different tunneling protocols in a switch or router, said API comprising: a) a tunneling interface data structure having a plurality of parameters (Shrader shows a tunnel interface has a plurality of parameters (column 9, lines 5-59).); and b) a plurality of functions for setting the parameters of the tunneling interface data structure, wherein a tunneling interface data structure is configurable to implement any

one of said plurality of different tunneling protocols by using at least some of said plurality of functions (Shrader shows the tunnel interface has various functions to implement tunneling by using the functions (column 6, lines 25-37)).

(Claim 32 discloses) the API according to claim 31, wherein: said plurality of parameters including a local source address and a remote destination address (Shrader shows the parameters include source and target information (column 9, lines 5-25)).

(Claim 36 discloses) the API according to claim 31, wherein: said plurality of functions includes an address function to set tunnel interface source and destination addresses (Shrader shows creating new settings including setting the source and destination addresses (column 6, lines 25-37)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 15, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication).

Claim 1 discloses a uniform method for implementing multiple tunneling protocols in a switch or router having a plurality of input interfaces and a plurality of output interfaces, comprising: a) providing a finite set of tunnel interfaces, each tunnel interface characterized by a set of tunnel specific attributes, a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol; b) mapping one of the input interfaces to one of said tunnel interfaces; and c) mapping said one of said tunnel interfaces to one of the output interfaces, whereby multiple tunneling protocols are implemented in a uniform way. Hauck teaches aggregate flow blocks are associated with a tunnel interface and each one contains specific information for that tunnel (column 3, lines 34-45), the tunnel identifier is used to map the input to a particular tunnel (column 3, lines 30-36), and an output interface is selected based on the tunnel specific information (column 3, lines 36-45). It fails to teach a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol. Greaves teaches each interface is associated with a protocol (page 1, paragraphs 4 and 8).

Hauck and Greaves are analogous art because they are both related to data transfer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the protocol to interface association in Greaves with the system in Hauck because the capability to support multiple interfaces allow various types of sections to be connected (Greaves, page 1, paragraph 8).

Claim 2 discloses the method according to claim 1, wherein: said tunnel specific attributes include parameters identifying tunnel end points. Hauck further teaches the aggregate flow block has an outgoing label, which includes identifying the end points (column 12, lines 46-59).

Claim 3 discloses the method according to claim 1, wherein: said step of mapping one of the input interfaces to one of said tunnel interfaces is performed by using context data in an arriving packet as a first search key to a first database. Hauck further teaches the first packet has data, which is used to map the flow of packets (column 6, lines 1-7).

Claim 4 discloses the method according to claim 3, wherein: said arriving packet has a header and said context data is obtained from said header. Hauck further teaches the label data is obtained from the header (column 5, lines 59-62).

Claim 5 discloses the method according to claim 4, further comprising: d) processing said header with said one of said tunnel interfaces to obtain a new header, wherein said step of mapping said one of said tunnel interfaces to one of the output interfaces is performed by using the new header as a second search key to a second

database. Hauck further teaches the label is translated to be used as the outgoing label (column 7, lines 46-49).

Claim 6 discloses the method according to claim 1, wherein: both said step of mapping one of the input interfaces to one of said tunnel interfaces and said step of mapping said one of said tunnel interfaces to one of the output interfaces are performed by using context data in an arriving packet as a first search key to a first database. Hauck further teaches the label of the first packet is used to map the input and output interfaces (column 10, lines 39-63).

Claim 7 discloses the method according to claim 6, wherein: said arriving packet has a header and said context data is obtained from said header. Hauck further teaches the first packet has a header and data is obtained from it (column 10, lines 39-44).

Claim 8 discloses the method according to claim 4, wherein: the one of the output interfaces is one of an L2 (layer two) and an L3 (layer three) interface, and said step of using the new header as a second search key to a second database yields one of an L2 and an L3 interface. Hauck further teaches the interfaces involved are layer 2 or layer 3 (Abstract, column 3, lines 3-19).

Claim 15 discloses a uniform method for implementing multiple tunneling protocols in a switch or router having a plurality of input streams and a plurality of output streams, comprising: a) providing a finite set of tunnel interfaces, a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first

tunneling protocol; and b) mapping input streams and output streams to tunnel interfaces for different tunneling protocols in a uniform manner. Hauck teaches aggregate flow blocks are associated with a tunnel interface and each one contains specific information for that tunnel (column 3, lines 34-45), and the tunnel identifier is used to map inputs to a particular tunnel and an output interface is selected based on the tunnel specific information (column 3, lines 30-45). It fails to teach a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol. Greaves teaches each interface is associated with a protocol (page 1, paragraphs 4 and 8).

Hauck and Greaves are analogous art because they are both related to data transfer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the protocol to interface association in Greaves with the system in Hauck because the capability to support multiple interfaces allow various types of sections to be connected (Greaves, page 1, paragraph 8).

Claim 22 discloses a uniform method for implementing multiple tunneling protocols in a switch or router, comprising: providing a plurality of tunnel interfaces, a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol, each tunnel interface having a plurality of parameters which are described in a uniform way, said plurality of parameters including a local

source address and a remote destination address. Hauck teaches aggregate flow blocks are associated with a tunnel interface and each one contains specific information for that tunnel including source and destination addresses (column 3, lines 34-45 and column 12, lines 46-59). It fails to teach a first of said tunnel interfaces being associated with one tunneling protocol and a second of said tunnel interfaces being associated with a second tunneling protocol different from said first tunneling protocol. Greaves teaches each interface is associated with a protocol (page 1, paragraphs 4 and 8).

Hauck and Greaves are analogous art because they are both related to data transfer.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the protocol to interface association in Greaves with the system in Hauck because the capability to support multiple interfaces allow various types of sections to be connected (Greaves, page 1, paragraph 8).

Claim 25 discloses the method according to claim 22, further comprising: providing a plurality of tunnel entry node structures and a plurality of tunnel exit node structures. Hauck further teaches multiple entry and exit node structures (figure 1A).

Claims 9 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Hauck (US Patent #6,977,932).

Claim 9 discloses a uniform method for implementing multiple tunneling protocols in a switch or router, comprising: a) associating an input interface, an output interface, and an information database with each of said multiple tunneling protocols; b)

associated a mapping interface and a mapping information base with each of said multiple tunneling protocols; and c) uniformly implementing a tunneling protocol by selecting an input interface, an output interface, and an information database associated with the tunneling protocol to be implemented. Shrader teaches each tunnel has an association with an input and output and any other pertinent information including an information database (column 9, lines 5-20), and each tunnel has an encryption policy and an associated encryption algorithm (column 9, lines 5-20). It fails to teach selecting an input interface, an output interface, and an information database associated with the tunneling protocol to be implemented. Hauck teaches selecting the appropriate tunnel based on the information received from the aggregate flow block (column 3, lines 30-45).

Shrader and Hauck are analogous art because they are both related to tunneling administration.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the selection feature in Hauck with the system in Shrader because all of the data may be processed similarly without introducing prohibitively time consuming and processor intensive tasks (Hauck, column 3, line 61 – column 4, line 2).

Claim 35 discloses the API according to claim 31, further comprising: c) a plurality of tunnel entry node structures; and d) a plurality of tunnel exit node structures. Shrader teaches the limitations of claim 31 as recited above. It fails to teach a plurality of tunnel entry node structures and a plurality of tunnel exit node structures. Hauck teaches multiple entry and exit node structures (figure 1A).

Shrader and Hauck are analogous art because they are both related to tunneling administration.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the multiple entry and exit node structures in Hauck with the system in Shrader because all of the data may be processed similarly without introducing prohibitively time consuming and processor intensive tasks (Hauck, column 3, line 61 – column 4, line 2).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Hauck (US Patent #6,977,932) as applied to claim 9 above, and further in view of applicant admitted prior art (AAPA).

Claim 14 discloses the method according to claim 9, wherein: for ETHERNET over MPLS (multiprotocol label switching) tunnel origination, the input interface is an ETHERNET interface, the output interface is an L2 (layer 2) interface, and the information database is a switching information base. Shrader in view of Hauck teaches the limitations of claim 9 as recited above. It fails to teach an input interface as an ETHERNET interface, the output interface is an L2 interface, and the information database is a switching information base. AAPA teaches using ETHERNET over MPLS, an interface is a layer 2 interface (page1, line 22 – page 2, line 2), and the FEC-to-NHLFE map is a switching information base (page 7, lines 5-10).

Shrader in view of Hauck and AAPA are analogous art because they are both related to tunnel networking.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the ETHERNET over MPLS interface in AAPA with the system in Shrader in view of Hauck because MPLS tunneling can identify and mark packets with labels to forward the packets (AAPA, page 6, lines 3-8).

Claims 16-21, 23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) as applied to claims 15 and 22 above, and further in view of Miller et al (US Patent #6,873,627).

Claim 16 discloses the method according to claim 15, wherein: some of the input streams are L2 (layer two) streams and some of the input streams are L3 (layer 3) streams, said step of providing a finite set of tunnel interfaces includes providing a set of L2 tunnel interfaces for L2 input streams and a set of L3 tunnel interfaces for L3 input streams. Hauck in view of Greaves teaches the limitations of claim 15 as recited above. It fails to teach some of the input streams are L2 streams and some of the input streams are L3 streams, said step of providing a finite set of tunnel interfaces includes providing a set of L2 tunnel interfaces for L2 input streams and a set of L3 tunnel interfaces for L3 input streams. Miller et al teaches a packet forwarding system, which can transfer any type of data including L2 and L3 streams (column 8, lines 27-48).

Hauck in view of Greaves and Miller et al are analogous art because they are both related to packing and sending data over networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the forwarding system in Miller et al with the system in Hauck in

view of Greaves because a simple, low risk way to configure a network with multicast functionality is provided (Miller, column 8, lines 27-48).

Claim 17 discloses the method according to claim 16, wherein: input streams are mapped to tunnel interfaces by a forwarding function. Miller et al further teaches using forwarding rules, which are used to map data (column 8, lines 49-62).

Claim 18 discloses the method according to claim 16, wherein: L2 input streams are mapped to L2 tunnel interfaces by a first forwarding function, and L3 input streams are mapped to L3 tunnel interfaces by a second forwarding function. Miller et al further teaches using forwarding rules, which are used to map data in various ways (column 8, lines 49-62).

Claim 19 discloses the method according to claim 18, wherein: some of the output streams are L2 streams and some of the output streams are L3 streams, L2 tunnel interfaces are mapped to L2 output streams by a third forwarding function, and L3 tunnel interfaces are mapped to L3 output streams by a fourth forwarding function. Miller et al further teaches using forwarding rules, which are used to map data in various ways (column 8, lines 49-62).

Claim 20 discloses the method according to claim 19, wherein: L2 tunnel interfaces are mapped to L3 output streams by a fifth forwarding function, and L3 tunnel interfaces are mapped to L2 output streams by a sixth forwarding function. Miller et al further teaches using forwarding rules, which are used to map data in various ways (column 8, lines 49-62).

Claim 21 discloses the method according to claim 17, wherein: the forwarding function performs mapping based on context data associated with input packets and database information which is configured and updated by a local host. Hauck further teaches the first packet has data, which is used to map the flow of packets (column 6, lines 1-7).

Claim 23 discloses the method according to claim 22, wherein: said plurality of parameters includes a hop limit or time to live. Hauck in view of Greaves teaches the limitations of claim 22 as recited above. It fails to teach including a hop limit or time to live. Miller et al teaches including a hop count, which can be set to a limit (column 12, lines 35-49).

Hauck in view of Greaves and Miller et al are analogous art because they are both related to packing and sending data over networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hop count in Miller et al with the system in Hauck in view of Greaves because the number of servers through which a packet is allowed to travel is limited (Miller, column 11, lines 45-46).

Claim 28 discloses the method according to claim 23, further comprising: providing a hop function to set the hop limit for a tunnel interface. Miller et al further teaches having the ability to set the hop limit (column 12, lines 35-49).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) in view of Miller et

al (US Patent #6,873,627) as applied to claim 23 above, and further in view of Rekhter et al (US Patent #6,339,595).

Claim 24 discloses the method according to claim 23, wherein: said plurality of parameters includes a tunnel MTU (maximum transmission unit). Hauck in view of Greaves in view of Miller et al teaches the limitations of claim 23 as recited above. It fails to teach including a tunnel MTU. Rekhter et al teaches including a MTU (column 41, lines 40-60).

Hauck in view of Greaves in view of Miller et al and Rekhter et al are analogous art because they are both related to sending data between networks in tunnels.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the MTU in Rekhter et al with the system in Hauck in view of Greaves in view of Miller et al because it will make possible to route to a source address of a fragmented packet (Rekhter, column 41, lines 40-60).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) as applied to claim 22 above, and further in view of Shrader (US Patent #5,864,666).

Claim 26 discloses the method according to claim 22, further comprising: providing an address function to set tunnel interface source and destination addresses. Hauck in view of Greaves teaches the limitations of claim 22 as recited above. It fails to teach providing an address function to set tunnel interface source and destination addresses. Shrader teaches creating new settings including setting the source and destination addresses (column 6, lines 25-37).

Hauck in view of Greaves and Shrader are analogous art because they are both related to tunneling administration.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the edit settings feature in Shrader with the system in Hauck in view of Greaves because a user is provided with an interface to administer IP tunneling (Shrader, column 1, lines 31-33).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) in view of Shrader (US Patent #5,864,666) as applied to claim 26 above, and further in view of Tsirtsis (US PGPUB, US2004/0148428).

Claim 27 discloses the method according to claim 26, further comprising: providing a first address function for IPv4 (internet protocol version four) interfaces and a second address function for IPv6 (internet protocol version six) interfaces. Hauck in view of Greaves in view of Shrader teaches the limitations of claim 26 as recited above. It fails to teach providing IPv4 and IPv6 interfaces. Tsirtsis teaches using both IPv4 and IPv6 (paragraph 32).

Hauck in view of Greaves in view of Shrader and Tsirtsis are analogous art because they are both related to packet tunneling.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the interface in Tsirtsis with the system in Hauck in view of Greaves in view of Shrader because the data is able to be moved in networks that support IPv4, IPv6, or both (Tsirtsis, paragraph 32).

Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck (US Patent #6,977,932) in view of Greaves (Non Patent Publication) as applied to claim 22 above, and further in view of applicant admitted prior art (AAPA).

Claim 29 discloses the method according to claim 22, wherein: said plurality of parameters includes MPLS (multiprotocol label switching) encapsulation information and actions to be performed on MPLS packets. Hauck in view of Greaves teaches the limitations of claim 22 as recited above. It fails to tech of including MPLS encapsulation information and actions to be performed on MPLS packets. AAPA teaches an incoming label map, which specifies what actions to take when a packet is received (page 6, line 21 – page 7, line 3).

Hauck in view of Greaves and AAPA are analogous art because they are both related to tunnel networking.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the incoming label map in AAPA with the system in Hauck in view of Greaves because MPLS tunneling can identify and mark packets with labels to forward the packets (AAPA, page 6, lines 3-8).

Claim 30 discloses the method according to claim 29, further comprising: providing an MPLS function to associate an MPLS LIB (label information base) with an MPLS interface. AAPA further teaches an incoming label map is built by being associated with information from the label distribution protocol engine (page 6, line 21 – page 7, line 3).

Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Miller et al (US Patent #6,873,627).

Claim 33 discloses the API according to claim 32, wherein: said plurality of parameters includes a hop limit or time to live. Shrader teaches the limitations of claim 32 as recited above. It fails to teach including a hop limit or time to live. Miller et al teaches including a hop count, which can be set to a limit (column 12, lines 35-49).

Shrader and Miller et al are analogous art because they are both related to packing and sending data over networks.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the hop count in Miller et al with the system in Shrader because the number of servers through which a packet is allowed to travel is limited (Miller, column 11, lines 45-46).

Claim 38 discloses the API according to claim 33, wherein: said plurality of functions includes a hop function to set the hop limit for a tunnel interface. Miller et al further teaches having the ability to set the hop limit (column 12, lines 35-49).

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Miller et al (US Patent #6,873,627) as applied to claim 33 above, and further in view of Rekhter et al (US Patent #6,339,595).

Claim 34 discloses the API according to claim 33, wherein: said plurality of parameters includes a tunnel MTU (maximum transmission unit). Shrader in view of Miller et al teaches the limitations of claim 33 as recited above. It fails to teach including a tunnel MTU. Rekhter et al teaches including a MTU (column 41, lines 40-60).

Shrader in view of Miller et al and Rekhter et al are analogous art because they are both related to sending data between networks in tunnels.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the MTU in Rekhter et al with the system in Shrader in view of Miller et al because it will make possible to route to a source address of a fragmented packet (Rekhter, column 41, lines 40-60).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of Tsirtsis (US PGPUB US2004/0148428).

Claim 37 discloses the API according to claim 36, wherein: said plurality of functions includes a first address function for IPv4 (internet protocol version four) interfaces and a second address function for IPv6 (internet protocol version six) interfaces. Shrader teaches the limitations of claim 36 as recited above. It fails to teach providing IPv4 and IPv6 interfaces. Tsirtsis teaches using both IPv4 and IPv6 (paragraph 32).

Shrader and Tsirtsis are analogous art because they are both related to packet tunneling.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the interface in Tsirtsis with the system in Shrader because the data is able to be moved in networks that support IPv4, IPv6, or both (Tsirtsis, paragraph 32).

Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shrader (US Patent #5,864,666) in view of applicant admitted prior art (AAPA).

Claim 39 discloses the API according to claim 31, wherein: said plurality of parameters includes MPLS (multiprotocol label switching) encapsulation information and actions to be performed on MPLS packets. Shrader teaches the limitations of claim 31 as recited above. It fails to tech of including MPLS encapsulation information and actions to be performed on MPLS packets. AAPA teaches an incoming label map, which specifies what actions to take when a packet is received (page 6, line 21 – page 7, line 3).

Shrader and AAPA are analogous art because they are both related to tunnel networking.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the incoming label map in AAPA with the system in Shrader because MPLS tunneling can identify and mark packets with labels to forward the packets (AAPA, page 6, lines 3-8).

Claim 40 discloses the API according to claim 39, wherein: said plurality of functions includes an MPLS function to associate an MPLS LIB (label information base) with an MPLS interface. AAPA further teaches an incoming label map is built by being associated with information from the label distribution protocol engine (page 6, line 21 – page 7, line 3).

(10) Response to Argument

A. Claims 31, 32, and 36

Applicant asserts Shrader does not disclose implementing a plurality of tunneling protocols. The Examiner respectfully disagrees, Shrader shows multiple tunnel

definitions defining various different tunnels may be loaded and the system is capable of using any set of tunnel and filter rules for the various tunnels with minimal adaptation (column 6, lines 25-37, and column 16, lines 44-52).

B. Claims 1-8, 15, 22, and 25

Applicant asserts Hauck in view of Greaves does not suggest the use of multiple tunneling protocols in a single switch or router, nor does it suggest implementing multiple tunneling protocols in a uniform manner. The Examiner respectfully disagrees, Hauck in view of Greaves teaches aggregate flow blocks are each associated with a tunnel interface and each interface which is associated with a tunneling protocol contains specific information for the specified tunnel (Hauck, column 3, lines 34-45 and Greaves, page 1, paragraphs 4 and 8), a tunnel identifier is used to map the input to a particular tunnel (Hauck, column 3, lines 30-36), and an output interface is selected based on the tunnel specific information (Hauck, column 3, lines 36-45).

In response to applicant's argument that Greaves is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Greaves teaches of data transfer using various interfaces each associated with a protocol.

Applicant asserts there is not suggestion in Hauck to use context data in an arriving packet to map an input interface to a one of a plurality of tunnel interfaces, as

recited in claim 3. The Examiner respectfully disagrees, Hauck teaches the first packet has data which is used to perform a lookup to determine which interface the data is mapped to (column 6, lines 1-7).

Applicant asserts Hauck does not teach both the steps of mapping one of the input interfaces to one of said tunnel interfaces and mapping said one of said tunnel interfaces to one of the output interfaces are performed by using context data in an arriving packet as a first search key to a first database as recited in claim 6. The Examiner respectfully disagrees, Hauck teaches the label of the first packet is used to map the input and output interfaces of the microflow (column 10, lines 39-63).

C. Claims 9 and 35

Applicant asserts there is not suggestion of implementing a plurality of tunneling protocols in Shrader in view of Hauck. The Examiner respectfully disagrees, Shrader teaches multiple tunnel definitions defining various different tunnels may be loaded and the system is capable of using any set of tunnel and filter rules for the various tunnels with minimal adaptation (column 6, lines 25-37, and column 16, lines 44-52).

Applicant asserts Shrader in view of Hauck does not teach a plurality of entry and exit node structures as recited in claim 35. The Examiner respectfully disagrees, Hauck teaches multiple points of entry to the ingress line card as well as multiple points of exit from the egress line card (figure 1A).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Brian Gillis
Examiner
Art Unit 2141
BJG
1/29/2008

Conferees:

JASON CARDONE
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